

HELP SPREAD THE TRUTH


During the last six months or so, general aviation has been under heavy pressure exerted by those who would restrict this portion of the civil aviation industry at airports and on the airways. The pressure built up as a result of two midair collisions between airliners and general aviation aircraft. Whether or not the smaller planes were to blame was not considered when the severe restrictions were advanced. Just being in the air at the same time the airliners were flying appeared to be ample reason to the uninformed for any measures that might be taken against general aviation aircraft.

During this period of crisis, many of you have been greatly concerned about the threat to your flying and have written AOPA asking, "What can I do to help?"

One of the most effective ways you can aid in this critical fight is to get the truth about general aviation, and its importance in the economy of the nation and your community, to the newspapers, civic clubs and leading citizens in your own area. Letters to the members of your Congressional delegation in Washington, giving your views on general aviation, also will be of assistance.

Beginning on the next page is a special supplement, **The Truth About General Aviation**, which should be a valuable tool to you in helping out in the total effort. The supplement can be removed from the magazine by straightening the staples that bind the magazine, and lifting out the 12 pages. Be sure that the staples are again bent into place; if you don't do this, the magazine will fall apart.

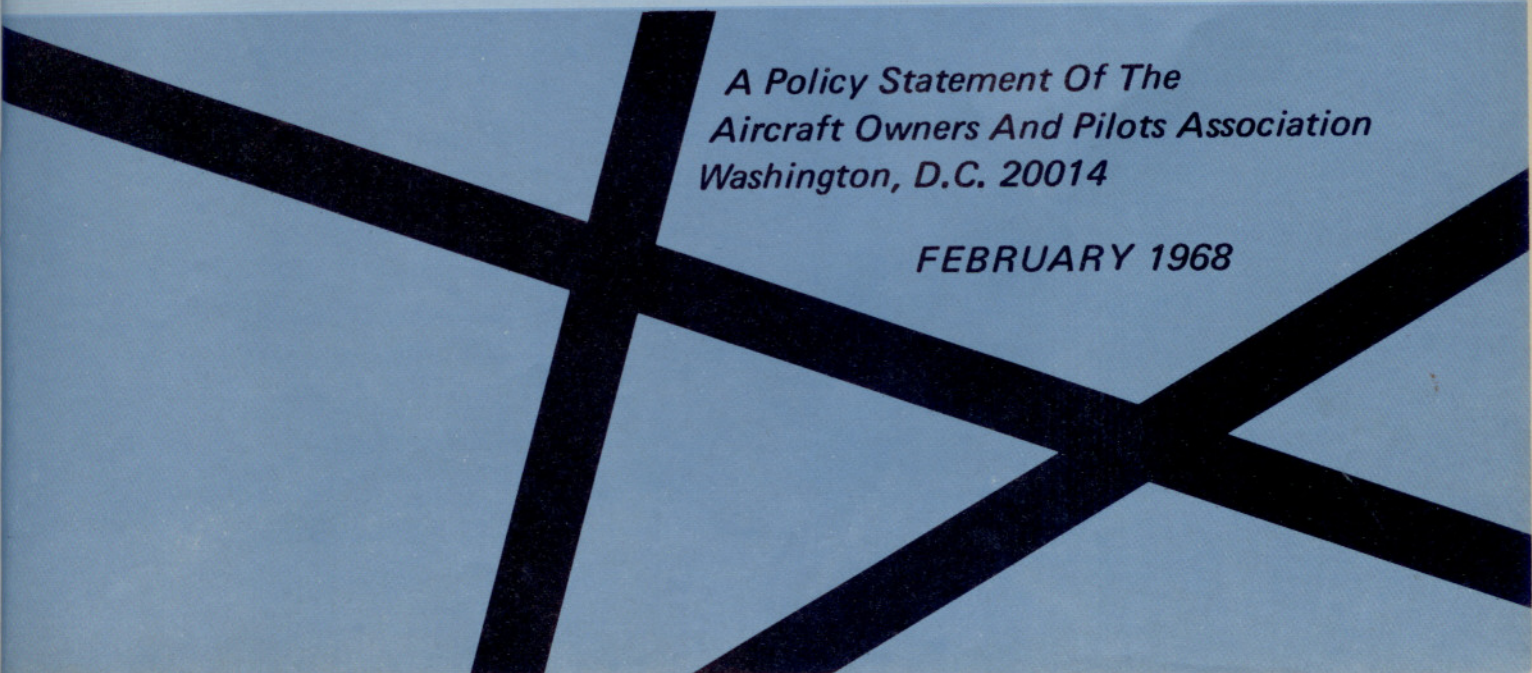
Why not make plans to get copies of **The Truth About General Aviation** into the hands of the editor of your local newspaper, the Mayor and members of the City Council, county officials who have something to do with airport development, members of your civic club, Chamber of Commerce, etc.? AOPA will reprint the supplement. If you want an extra copy, write us and we will send it without charge. If you want the reprint in quantities we will supply them postpaid at about our costs: 25 copies, \$2.50; 50 copies, \$5; 100 copies, \$10. In addition we will throw in easy-to-prepare transmittal notes—one for each reprint—which will save you time in mailing out quantities. Address your letters and orders for reprints to: Aircraft Owners and Pilots Association, Attention: The Truth About General Aviation; P.O. Box 5800, Washington, D.C. 20014.



THE TRUTH ABOUT GENERAL AVIATION

*A Policy Statement Of The
Aircraft Owners And Pilots Association
Washington, D.C. 20014*

FEBRUARY 1968



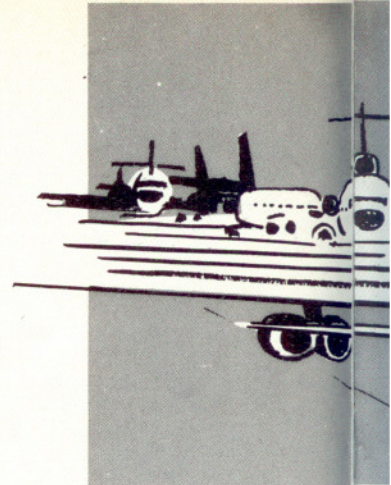
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"BAN PRIVATE AIRPLANES FROM MAJOR AIRPORTS" is the theme of a powerful propaganda campaign being conducted by the airlines to take over the public domain of airports and airspace for their own gain. This theme and similar proposed restrictions on private and business aircraft (general aviation) have gained momentum in recent months. Press and broadcasters have covered it. The Federal Government has proposed new rules. Committees of the Congress have held hearings. Some state and local authorities have imposed or tried to impose various restrictions on general aviation. Yet, without general aviation, our system of major airlines and the airports that they serve would be like a superhighway system with no connecting roads to the smaller communities.

In many cases, information reaching the public has been so distorted and inaccurate as to convey a completely erroneous picture of civil aviation.

The Aircraft Owners and Pilots Association (AOPA) is an organization of more than 141,000 people who own and fly general aviation airplanes for a variety of personal and business reasons. Misinformation and misunderstanding regarding this type of flying has accelerated recently. AOPA has prepared this document as a public service to provide a better understanding of general aviation by the public at large.





BACKGROUND

For easy understanding, the use of civil airplanes is divided into two groups. The largest group, known as "general aviation," consists of a wide range of flight activities including the training of pilots; transportation of company executives, salesmen, engineers, and others for business purposes; crop dusting, ambulance service, forest fire fighting, pipeline and power-line patrol, police and rescue work, survey and geological exploration, air taxi service, transportation and recreation, and a host of other such diverse activities. The smaller group, a by-product of general aviation development, consists of the scheduled airlines.

General aviation preceded the airlines by many years, dating back to those first general aviation pilots, the Wright brothers. As general aviation grew, the transportation of people and goods on a commercial basis was a logical result. This led to air transportation on a regular basis, evolving into our present scheduled airline system.

As the airlines grew in size and in number, the competitive scramble for revenues led to concentration of overlapping schedules at major airports. This, in turn, has resulted in congestion and delays. For example, in a recent month there were 19 daily airline departures scheduled from O'Hare Airport in Chicago at precisely 5:00 p.m. Obviously, 19 aircraft cannot take off at one time and the slower ones to leave the gate will suffer increasing periods of delay. Other major airports have the same problem.

The fight between the airlines for a larger slice of passenger and airfreight dollar has been marked also by introduction of larger and faster airplanes, with each airline trying to outdo the competition. While the airline fleet has not grown appreciably in numbers of airplanes in recent years, the passenger carrying capacity has increased manyfold as 21- and 40-passenger airplanes

have been replaced by giant jets carrying 100 or more passengers. The flood of passengers at most major airports resulting from this development has overwhelmed the automobile parking lots, ticket counters, baggage rooms, access roads and even the more prosaic conveniences such as toilets and pay telephones. However, this has had no real effect on the use of the runways, since the number of airplanes remained relatively unchanged.

The Congestion Issue

Congestion and delay on the runways has been caused by airline scheduling practices and compounded by the insistence of the airlines that their aircraft operate under instrument flight rules—IFR, which is designed for bad weather—even when the weather is good. Since IFR flights must be handled individually by an air traffic controller, this means that succeeding aircraft waiting for takeoff or landing must be delayed to space them apart just as if they could not see each other.

The increasing delays, congestion and inconveniences to airline passengers have drawn severe criticism from all quarters. In an effort to point the finger of responsibility elsewhere, airline spokesmen have deluged the public with a propaganda campaign designed to blame general aviation for the delays and congestion. This campaign also has the objective of reserving our major public airports exclusively for the airlines, thus gaining them some additional passengers who would not be able to utilize their own airplanes at these locations.

Many recent proposals would bar and restrict general aviation use of the major airports and would impose other severe restrictions in the airspace most frequently used by the scheduled airlines. This document is designed to place these matters in proper perspective for the person who knows little or nothing about aviation other than what he reads in magazines and newspapers, or hears on radio and TV.



AIRCRAFT

The general aviation fleet in the United States is made up of a conservatively estimated 110,000 active aircraft (as of January 1, 1968), as compared with less than 2,300 operated by the U.S. scheduled airlines.

(All International Air Transport Association-affiliated airlines in the world have only 3,700 airplanes and

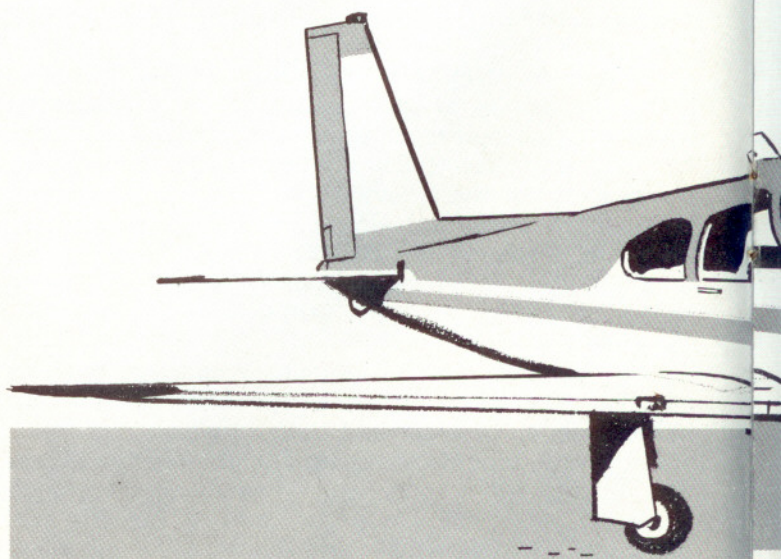
the combined totals of all air carriers, excluding communist China and the U.S.S.R., is less than 6,000). General aviation airplanes range from small trainers to multi-engine business jets and include helicopters, specialized agricultural airplanes and many other diverse types. In point of numbers, there are more than 50 active general aviation airplanes for every scheduled airline airplane in the United States.

U.S. CIVIL AVIATION FLEET, 1967*

		% of Total
Total Active Civil Aircraft	106,978	100.0
General Aviation	104,706	97.9
Single-engine, 1-3 place	35,681	
Single-engine, 4-place and over	52,940	
Multi-engine piston	12,671	12.1 1/2
Turboprops and jets	915	
Rotorcraft	1,622	
Other (gliders, etc.)	877	
Air Carrier	2,272	2.1
Piston-engine	873	
Turboprops and jets	1,378	
Rotorcraft	21	

* Official FAA figures as of January 1, 1967, latest tabulation available.

1/2 Percentage of total general aviation fleet.



PILOTS

The general aviation fleet is flown by about 550,000 licensed pilots. Their proficiencies vary according to their individual needs, but all must meet standards of health, knowledge and flying ability prescribed by Federal regulations.

It is a carefully fostered misconception that only "professional airline pilots" are competent to ply the airways and use our busy airports. Out of all licensed pilots, less than 25,000 are employed by the airlines. Thousands of others, flying for business or personal reasons, are equally well qualified in training and experience. As with our highways and waterways, the qualifications of the operator are geared to what he is doing. Those operating vehicles for hire are required to meet more rigid examinations than the operators of private vehicles. But that does not bar the private vehicle operator from the highways or the waterways and neither should it bar the properly licensed pilot from our public airports and airways.

Who Flies And Why?

People who are not pilots may wonder why anyone should fly. The reasons are even more diverse than the use of the aircraft involved. Many general aviation pilots fly for recreational purposes or for the sheer love of it. But the greatest activity is by those who fly for business reasons and for personal transportation. Once a person discovers that an airplane can open up new activities, new business opportunities, and even new recreational facilities that otherwise would be impossible to reach, the next progressive step is to start using the vehicle for personal transportation.

AIRPORTS

The question has been asked, "If one needs to travel by air, why not ride the scheduled airlines?" There are

nearly 10,000 airports in the United States, but the airlines operate at only 525 of those airports. Many cities have only one or two scheduled operations a day. Travel by airline to and from these locations is at the mercy of the airline schedule, not according to the needs of the traveler. More than 68 percent of the airlines' business, in fact, takes place at only 22 airports. General aviation can and does make use of all the airports, whereas the airlines operate only to those cities where their routes will be profitable. When profits fall, they petition for discontinuance of their routes. This happened at 189 cities in the period 1950-1962, leaving them without airline service and entirely dependent on general aviation for air transportation. In 1960, 571 airports had airline service; by 1967, only 525 did.

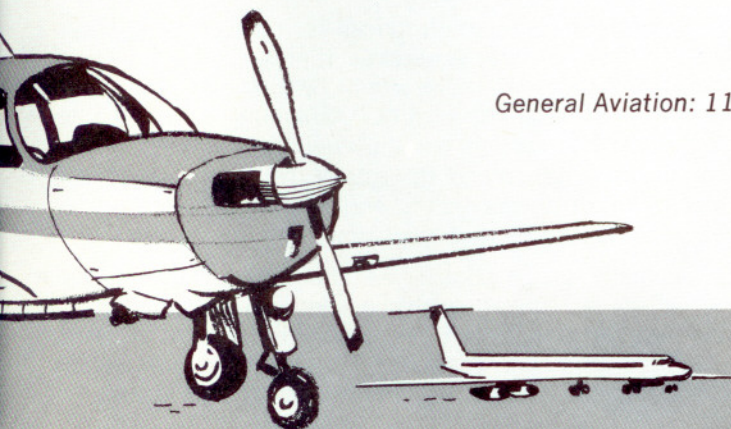
Recently the implication has been made that general aviation has overrun airports that were built for the airlines. This is about as misleading as to say that private automobiles are cluttering up highways that were built for trucks and buses. Major metropolitan public airports can be reasonably compared with public highways in that both were built with tax dollars, both are owned by the public, and both are intended for the transportation needs of all the public who desire to use them.

Public Ownership

Unlike the national highway system, however, only about one-third of the nation's airports are publicly owned. The rest are provided and maintained by private owners and private capital to meet some of the needs of general aviation, a vital link in the national transportation system. Since scheduled airlines stop at only 5 percent of the airports, general aviation provides the only air transportation at the other 95 percent and is the connecting link between those and the airports served by commercial airlines.

Federal Aid

All major publicly owned airports have received huge amounts of Federal tax monies to make them as useful and beneficial as possible to all the public. To promote



General Aviation: 110,000 planes—Airlines: 2,300 planes
(Jan. 1, 1968, estimate)



1 - \$180 million airport=180 · \$1 million airports, or 1,800 · \$100,000 landing strips

the growth of civil aviation, the Federal Government in 1947 started a program to encourage a nationwide system of airports. Currently, the Federal contribution for airport construction and improvement approximates \$70,000,000 a year. Under current cost estimates, this is equivalent to the cost of about 51 miles of superhighway. Local authorities, often in combination with state agencies, match the Federal contribution dollar for dollar. When Congress adopted this program, the objective was on a national system of public airports that would enable rapid development of all civil aviation. Congress was particularly concerned that the growth of general aviation, or "private flying" as it was known at that time, should be facilitated.

of users without unjust discrimination. All major airports in the United States have received Federal aid on this condition.

General aviation interests have provided more than 6,400 privately owned airports to serve general aviation. The airlines own no airports and depend entirely on the public airport system to meet the needs of their profit-making operations.

Obviously, if an airline company, which is operating for the sole purpose of making a profit, wants an airport for its exclusive use, then it is logical that it should construct and pay for its own, rather than using the public airports. This would be comparable to bus and rail lines providing their own terminals.

CIVIL AIRPORTS IN THE UNITED STATES, 1967*

Ownership	Lighted	Unlighted	Paved	Unpaved
Public (3,630)	2,062	1,568	2,062	1,568
Private (6,043)	926	5,117	797	5,246
Total (9,673)	2,988	6,685	2,859	6,814

* Official FAA figures as of January 1, 1967, latest official tabulation available.

Total includes 418 heliports and 363 seaplane bases.

To insure that airports constructed with the help of Federal money would remain open to all the public, the Congress limited the grant of Federal funds to publicly owned airports which would remain open to all classes

Changing Needs

Before the airlines introduced jet transports, the runways needed by both general aviation and airline aircraft were relatively modest in length, width, and strength—in most cases less than 5,000 feet long. As the airline jets came into service, communities wanting airline service had to lengthen and strengthen runways, with 10,000 feet or more of heavy-duty concrete being installed for transcontinental or overseas jets.

In many cases, these are the same runways that served general aviation before they were lengthened for the jets and there are no other runways or airports available that will adequately serve the needs of the private and business user of general aviation aircraft.

General aviation must be able to use these airports;

otherwise our air transportation system will lose the connecting link between the 525 airline stops and the 9,100 other airports serving communities of all sizes. In addition to the matter of airline-connecting passengers, other general aviation pilots will need to use these airports because of business at or in the vicinity of the airport, or simply because there are no other nearby airports that have the necessary services.

At many locations throughout the country, all Federal aviation services, including radar, weather bureau, approach lights and landing aids have been concentrated on a single airport in the community. These airports serve the airlines, general aviation and even some military operations. There is not enough activity to warrant separate installations at airports reserved exclusively for each type of operation. Thus, the taxpayers' dollar does the best work for the national interest by having one well-equipped airport to serve all flying activities of these communities.

Practical Solutions

When aviation activities start to outgrow the airport, there are several ways to provide additional capacity without discrimination and in the best interests of the community. Oakland, California, did this by building a new jet runway primarily for the airlines, while general aviation continued to use the existing portion of the airport. Minneapolis has several good general aviation airports placed strategically around the city in locations convenient for general aviation for those pilots who do not have to use the major airport that has been expanded to meet the needs of the airline jets. The economic soundness of this planning is described later. It is significant that both Oakland and Minneapolis recognized the need to continue to serve general aviation at the same airport that serves the airlines.

AIRSPACE

Another popular misconception is that our skies are becoming crowded and drastic measures must be taken to prevent wholesale collisions in the air. Actually, our airspace is immense and all of the airplanes in the United States could be accommodated in a block of airspace no larger than the State of Nebraska.

As the airlines must use public airports for their commercial operations, so must they use the public airways just as the bus and truck lines use the public highways and the barge lines use the public waterways. In all cases, the commercial user enjoys no priority over the private user. While a bus or truck can carry many times what the private automobile can, that does not give it any special priority. Nor does the capability of traveling 100 miles per hour give the operator the right to travel at any speed that he wishes. In fact, the truck on the public highways is almost always restricted to speeds below those allowed for the lighter and more maneuverable private vehicle. The same principle must apply in the air. Reasonable speed limits must apply to the vehicle that creates the hazard, when it operates in the lower airspace used by the majority of slower aircraft. Likewise, protective corridors must be established at major airports to contain the flight path of the fast and cumbersome jets when they descend from or climb to high altitude. In other words, the safety restrictions must be placed on the aircraft that create the hazard.

In Perspective

The comparison of 100-passenger jets with a small, light airplane carrying four persons often leads to the conclusion that the airlines carry or serve many times more passengers than general aviation. However, the



Living Together On An Airport

general aviation fleet is 50 times larger and flies more than four times as many hours as the airlines. General aviation carries about half as many people as the airlines in intercity transportation, and carries again that many in localized transportation, for a total that exceeds that of the airlines.



AIR TRAFFIC CONTROL

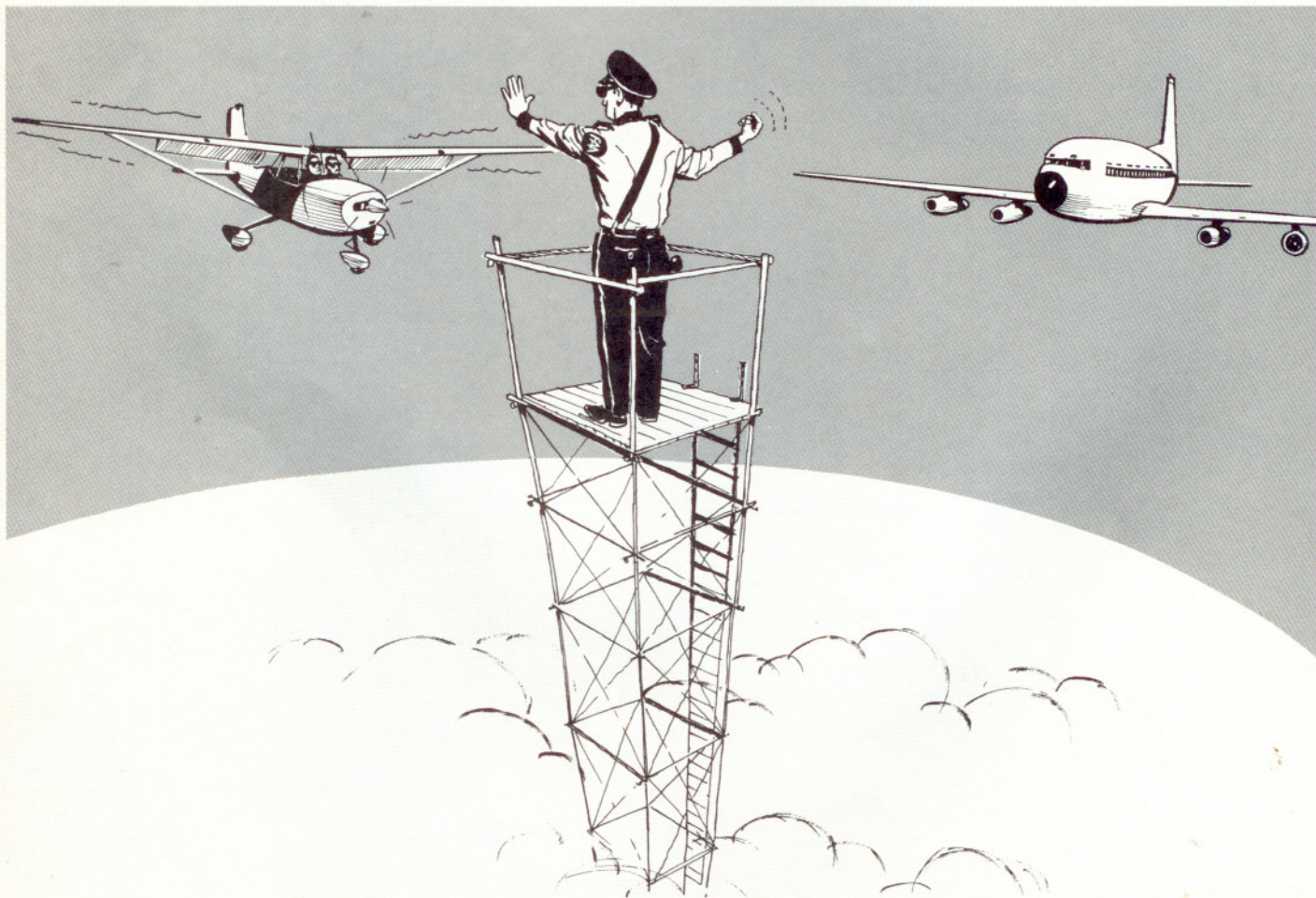
Both general aviation and airline pilots fly by the same Federal "rules of the road." They must use the airspace in common as they crisscross our skies from east to west and north to south.

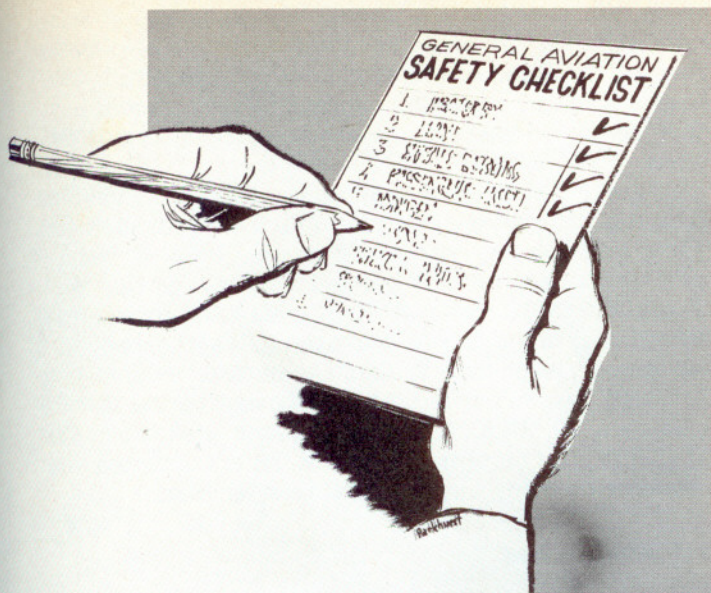
The idea has been fostered that the Federal air traffic control system should be a cure-all in preventing collisions and should rigidly control the flight of each airplane. In actual fact, our air traffic control system was designed primarily to keep aircraft separated only in bad weather when the pilots were not able to see each other. A degree of control is provided at busy airports, regardless of weather, just as police and traffic signals control busy road intersections, but, as on the highways, this control does not and cannot always prevent accidents.

False Security

The airlines' insistence on using the air traffic control system even when weather does not require it is an attempt to shift some of the responsibility for avoiding other traffic to the Federal controllers. However, history has shown that being under the control of the Federal system is not a sure cure in preventing collisions. Some of the most disastrous aviation collisions have occurred to aircraft that were operating under the Federal air traffic control system.

It has been estimated that about 10 percent of all flying in the United States is under the instrument (bad weather) rules requiring air traffic control. This means that 90 percent is conducted by pilots flying under general rules of the road and avoiding other traffic on a see-and-be-seen basis. This is much like the operation of a boat on our waterways or an automobile on our highways. If each of us needed permission from a policeman for every trip in our automobile—with all the details including streets and roads to be followed, speeds to be used, fuel available, and people on board written out in advance—you can well imagine the result. The value and utility of the private auto would collapse. Movement of motor vehicles would diminish to a trickle. A tremendous burden would fall on the taxpayers to pay for the traffic officials and equipment needed to get traffic moving again in the same way that some people would have air traffic controlled.





SAFETY IN THE AIR

Safety is the most misunderstood and distorted subject in aviation today.

Congestion of airline passenger terminal facilities has been mistaken for congestion of flight facilities and the creation of unsafe flight conditions. Congestion results in delay and inconvenience, but it does not reduce safety.

The public has been fed a continuing barrage of misinformation and partial information to the effect that general aviation is extremely unsafe and that the death rate is climbing each year. The facts tell a different story.

Improving Record

The National Safety Council has reported figures showing that the number of accidental deaths from aviation are down 17.2 percent during the period 1948-1964. While aviation deaths were declining 17.2 percent, all types of accidental deaths increased 12.9 percent, with those involving automobiles up 47.9 percent and boating deaths up 26.3 percent. The death rate for general aviation declined some 22 percent from 1955-1965, while the automobile death rate declined only 11 percent during the same period.

A comparison of the fatalities in general aviation to those of the U.S. scheduled airlines during 1966 shows that the airline fatality rate was 5.323 per 100,000 hours flown and the general aviation rate was 5.085, despite the fact that general aviation includes many essential flying activities for industrial and agricultural purposes which involve extra hazards. (Calculation of fatality rates are based upon preliminary statistics for 1966 completed by the U.S. Government.)

Some Worthwhile Measures

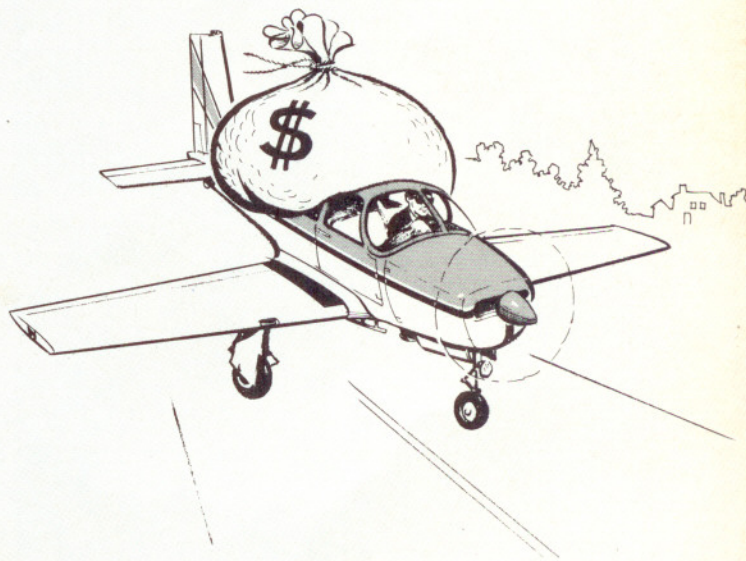
While the safety record for general aviation is good

and is steadily improving, the entire industry seeks further improvements. AOPA has, for example, sponsored training clinics over the past five years in all parts of the country to help pilots improve their skills. Some 20,000 people have taken these clinic courses to become better and safer pilots. In addition, AOPA has distributed hundreds of thousands of copies of clinic training materials to flight instructors to broaden the benefit of its flight proficiency improvement program.

AVIATION ECONOMICS

There is a popular misconception that general aviation does not "pay its way" at our public airports. To the contrary, general aviation pays substantially, often more than the airlines, even at airports used jointly by both. For example, Rockford, Illinois, served by one airline, receives 10 percent of its airport income from the airline, 60 percent from general aviation, and the remainder from concessions supported by both general aviation and airline people and from government leases.

At Phoenix, Arizona, served by six airlines, the municipal airport receives 28 percent of its revenue from the airlines, 23 percent from general aviation, and about 45 percent from concessions supported by both airline passengers and general aviation. The remaining income is from government leases.



General aviation pays substantial fuel taxes, while airline jet fuel, which comprises the great bulk of the airline fuel purchases, is not subject to a Federal fuel tax. Airline customers pay an excise tax on passenger tickets, but that is paid by the customer—not the airline.

General aviation also pays state fuel taxes in substantial amounts while the airlines are frequently exempted or pay at lower rates. For example, in Virginia during the year 1966-1967, general aviation paid taxes amounting to \$1,242,729, while the 12 airlines operating in

that state paid only \$97,554.49. The effective tax rate per gallon was \$.068 for general aviation and \$.0011 for the airlines.

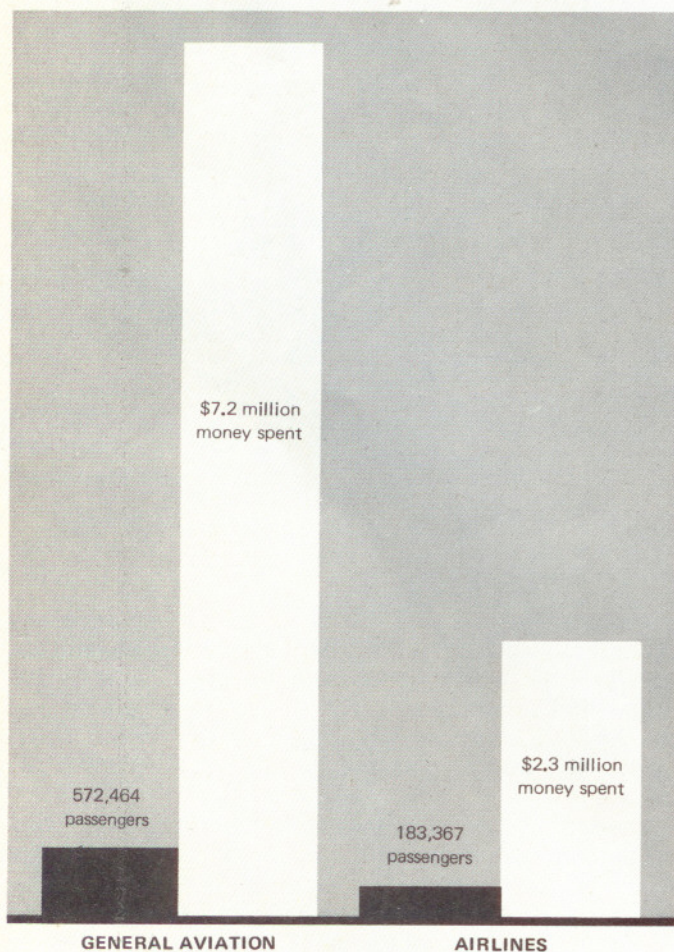
General aviation at Washington National Airport annually pays approximately \$500,000 into the Federal Treasury—at a rate of 8 1/8¢ per gallon.

The money collected directly from general aviation for services provided at an airport is only a small part of the picture. The contribution of general aviation, not only to the national economy, but to the economy of the local community is little known and very seldom appreciated by people not directly concerned. All too often, the airport is viewed as a special benefit provided for the convenience of a few people who own and fly airplanes, and consequently there is increasing pressure by uninformed officials to "make the users pay for these airports." This has led to the levying of landing and similar "use fees" by some airports, even for noncommercial operations. As a result, some air traffic is driven to using other airports that welcome business, realizing that air traffic brings many benefits to the community that cannot be counted at the airport cash register.

Community Benefits

When a customer is bringing dollars into a community to spend for business and recreation, it makes little

AIR TRAVELERS VISITING FORT LAUDERDALE, FLORIDA, DURING 1964 AND DIRECT ECONOMIC BENEFITS TO THE COMMUNITY



sense to charge him for landing his airplane to do business. The airport is a money-generating asset to the community. Some city fathers have recognized this and have attracted substantial capital investments and business to their cities through an enlightened airport program.

A survey by airport authorities at Fort Lauderdale (Florida) International Airport indicated that 572,464 pilots and passengers arrived during 1964 in general aviation aircraft. Airlines brought 183,367. Of this total, nearly 150,000 arrived at Fort Lauderdale Airport from areas outside the U.S.A. The average cash expenditure per person, each day in Fort Lauderdale, amounted to \$14 and resulted in an annual income to the municipality of \$9,500,000. Some persons stayed in Fort Lauderdale for more than one day. Others departed after refueling or using airport restaurant facilities.

Value Recognized

The Minneapolis-St. Paul (Minnesota) Metropolitan Airports Commission, in a recent survey to determine the impact of general aviation on the economy, found that these operations bring an annual business volume of \$233,000,000 a year which they would not otherwise have. By 1975, the volume will be \$386,000,000 per year. One hundred companies in the area now have company-owned aircraft flown by professional pilots. Of the 1,200 persons flown in to visit Minnesota Mining and Manufacturing Company each year, 95 percent had never previously been in the Twin Cities area. In a subsequent evaluation of the six-airport survey, it was determined that each \$1,000 of public monies invested in general aviation produced in excess of \$2,000,000 per year gross business.

Islip, New York—since 1959, nine firms employing more than 3,500 persons have located adjacent to the city's airport; an additional 1,200 persons are employed by industry directly upon the airport. When converted to community benefits, this means \$19,000,000 in personal income, \$12,000,000 in retail sales and \$135,000 in increased community tax income.

In 1964, 51 airport industrial parks housed 334 separate industrial plants. The figures have increased appreciably since then.

The Missouri Division of Commerce and Industrial Development determined that 84 percent of the 500 largest corporations of America required an airport within 20 miles of their plant location; 39 percent said "adjacent or near."

Alva, Oklahoma—A new airstrip became the foundation for several new businesses and the largest payroll in the county.

South Plainfield, New Jersey—In a survey regarding retention and/or improvement of Hadley Field, 30 percent of companies (employing 86 percent of all industrial workers in the county) planned to move if the airport was not retained; 62.6 percent commented on the advantage of a good facility as far as customers and suppliers were concerned.

Special Or Public Benefit?

Despite repeated evidence of this kind, there still is

not widespread recognition of the economic value of general aviation to a community and the nation. Many, including some Federal officials who should know better, feel that airports serving general aviation are strictly a special benefit for a "few fat cats" who fly about aimlessly in personal airplanes. To those who have sought and learned the facts, general aviation is an accepted and well-established adjunct to many of the industries that are so vital to our national welfare. It provides pilots and aircraft during disasters and emergencies, even to the point of filling in the gap during airline strikes! It provides employment for many thousands of people and helps in the problem of the U.S. balance of payments through its export sale of some \$78,000,000 worth of aircraft (1967).

CONCLUSION

This describes as nontechnically as possible, the civil aviation situation in our country today. AOPA has recommended to the Federal Aviation Administration several remedies to problems facing aviation today and in

the foreseeable future. Those recommendations are contained in the appendix of this document.

Air transportation is essential to our national welfare and is a significant contributor to our national economy. The air transportation system of our country is made up of both airline and general aviation. General aviation not only plays a major role in our national transportation system, but provides all the specialized aviation work so vital to agriculture, forestry, the fishing industry, and many others. It trains our pilots. It provides a vast reservoir of pilots, airplanes, and facilities for use in national emergencies or local disasters. No other country of the world has a general aviation complex that even remotely approaches that of the United States for size, value, utility or contribution to the national welfare and economy.

AOPA believes that enlightened and reasonable regulation will lead to increased safety and efficiency in the air, conservation of vital national resources such as airports and airspace, and continued development of our aviation industry.

It is AOPA's objective to maintain and foster a healthy, safe, and useful general aviation industry so that all citizens may enjoy and prosper from its benefits.

APPENDIX

SUMMARY OF AOPA RECOMMENDATIONS

The following is a summary of recommendations made by AOPA to the Administrator of the Federal Aviation Administration on August 23, 1967, and to the Subcommittee on Transportation and Aeronautics, U.S. House of Representatives during a hearing on Aviation Safety on August 28, 1967.

There has been a considerable amount of pressure from some quarters for "positive control" of all aircraft around major terminals and in the lower airspace along busy airways. This would require an instrument rating, a transponder and IFR type equipment in the aircraft. Positive control is not a guarantee against collision. It would not have prevented the Asheville collision where both aircraft were on IFR flight plans and were under the control of the Asheville ATC facility. Asheville has neither primary nor secondary radar, thus making the addition of a transponder requirement irrelevant. Likewise, these proposals would not have prevented the Dayton collision. In fact, they would not have prevented any of the most disastrous collisions over the last few years, such as Eastern and TWA over Long Island, or TWA and United over New York City wherein 134 people died.

These proposals would build a series of fences across the navigable airspace and impose extremely burdensome restrictions on general aviation aircraft for the use of this airspace, or to even be able to get through it from one side of the fence to the other. They also would add a great burden of additional traffic and work load on the controllers at a time when testimony before the Congress indicates that the FAA does not have enough controllers to handle current traffic. How this great additional work load would be absorbed in the centers, towers and flight service stations has not yet been developed by the proponents of these proposals.

AOPA believes that measures to enhance the avoidance of collision should be directed primarily at helping the pilot through improved visibility out of the cockpit, a requirement to watch for other traffic (just as we have at sea), warning devices to alert the pilot as to the proximity of other traffic, sensible speed limits in the airspace (just as we have on the highways), better traffic information and enhanced conspicuity of aircraft.

RECOMMENDATIONS

1. Rigidly enforce present general standards for cockpit visibility and establish more detailed and definitive minimum standards for cockpit visibility for all civil aircraft.

Background: In 1949, AOPA brought the limited cockpit visibility of some airline aircraft to light in testimony before the CAB accident investigating team concerned with the collision between a P-38 and Eastern Air Lines at Washington National Airport. Little was done to incorporate realistic standards in the airworthiness requirements, although general standards now exist in Parts 23 and 25 of the Federal Aviation Regulations. AOPA formally petitioned the CAB on March 19, 1956, for the establishment of realistic cockpit visibility standards in both Part 3 and Part 4 of the Civil Air Regulations. Strong objection from the airframe manufacturers prevented any effective action and this problem is still with us in the face of ever-increasing traffic. Regardless of how much of the traffic operates under the IFR rules, the great majority of flying is still done in VFR weather and even the IFR flight plan traffic must fall back on visual observation of other traffic during certain phases of their operation. Many states will not license an automobile that has any obstruction to the driver's vision, such as a small decal on the windshield. Yet, the Federal Government continues to certificate aircraft, with much higher speeds, with greatly reduced vision from within the cockpit.

2. Institute rule making to specifically require a lookout for other traffic when flying in VFR weather conditions.

Background: Over the years there have been a number of collisions wherein the aircraft were operating in VFR weather and the closure rates were relatively low. In many of these cases, there exists a good possibility that the collision could have been avoided if the pilots of the aircraft had been maintaining a lookout for other traffic.

3. Impose a speed limit of 250 knots in the airspace below 10,000 feet MSL. Approximately 96 percent of all general aviation aircraft flying is done below 10,000 feet MSL. This includes aircraft that are in slow flight configuration for arrival and departure from airports. The higher speed aircraft, particularly those with turbine power, usually are designed for greater operational efficiency at the higher altitudes and it makes no sense to permit these aircraft to operate at high speeds in the lower airspace, which must be used by the slower traffic, including aircraft landing and

taking off. (Ed. note: 250-knot speed limit below 10,000 feet adopted effective December 15, 1967.)

4. Raise the VFR flight visibility requirements to five miles for aircraft operating above 10,000 feet MSL at speeds in excess of 250 knots.

Background: There has been a considerable amount of discussion and study over the years with regard to proposals to raise the present three-mile VFR visibility requirement to five miles. Three miles remains an adequate visibility requirement for the slower speeds of 250 knots and below in the context of our recommendation for a speed limit below 10,000 feet. In the airspace above 10,000 feet MSL, increased visibility would appear to be a valid requirement for those aircraft that are operating at the higher speeds.

5. Establish climb and descent corridors for jet aircraft and require such aircraft to use these corridors unless adhering to the speed limits recommended in Item 3 above. The applicable rules would be essentially the same as those for military climb corridors. There would be no speed restrictions in the corridors.

Background: The airlines and the operators of general aviation jet aircraft are not able to utilize the maximum climb and descent capabilities of their aircraft with complete safety today because of the inability to see and avoid other aircraft or to take evasive action on a timely basis under conditions of high rate of climb or descent. This is especially true of many aircraft that have a high deck angle during such maneuvers. The climb corridor concept would expedite traffic safely and would permit better utilization of these aircraft during climb and descent. Other aircraft would be permitted to cross the corridor by means of a simple radio call to the traffic controller for permission.

6. Assign a high priority to improved conspicuity of aircraft.

Background: A considerable amount of effort has been expended in several different fields with respect to making an aircraft easily discernible to another pilot in the air. The efforts in this field have included reflective paints, distinctive painting schemes, high-intensity lighting and other means of enhancement of conspicuity. Several of these ideas have been partially explored, but the development efforts seem to have tapered off due to some of the difficulties encountered, or to a degree of indifference with respect to activities in this field as compared to more glamorous devices for detection of other traffic.

7. Increase the availability of radar advisories for all traffic.

Background: Most pilots know about and can get terminal area radar advisories. However, many pilots do not know that they also can get radar advisories while en route under the VFR rules. Further, the provision of this service is at the discretion of the controller and many times a pilot is refused service because the controller is "too busy with IFR flight plan traffic." This tends to discourage VFR pilots from even trying to use the en route radar system. The FAA must take positive steps to make this traffic advisory service available to all users of the airspace where radar coverage is available.

8. Assign high priority to the development of a proximity warning indicator (PWI) that is operationally and economically suitable for use by general aviation aircraft.

Background: AOPA's stated objective is for the development of a simple proximity warning device that could become a building block for a sophisticated collision avoidance system (CAS). The PWI would merely give the pilot warning of the presence of another aircraft, whereas the CAS would also indicate to the pilot that evasive action should be taken. The airlines currently are pushing a co-operative CAS which would work only with other aircraft having the same equipment. The production price has been estimated from \$30,000 to \$50,000. We recognize that the airlines must have some system to protect them from themselves in order to avoid a monstrous catastrophe such as a collision between two 747's with 400 passengers each. However, it is also obvious that there could be some misguided action to try to force general aviation into using any basic system adopted by the airlines. A \$30,000-plus device certainly is not suitable for general aviation.

The foregoing recommendations have been directed at the prevention of collisions. There are other areas wherein action

is needed by the FAA to improve safety and these are detailed below.

9. Improve the quality, quantity and scope of the aviation weather program.

Background: The present aviation weather services are inadequate to safely fulfill the needs of general aviation. The Civil Aeronautics Board has listed weather as a contributing factor in a significant number of general aviation accidents. We need regular weather observations from more locations, with greater frequency (some locations have only a few observations a day as required to get one or two airline schedules in and out), and improved forecasting. The latter is particularly critical since much of the forecasting now is done by computer on a probability basis and the hapless pilot all too often finds that the actual conditions encountered in flight have no relation to what was forecast.

10. Provide better accessibility to weather information, both to pilots in flight and to pilots on the ground for flight planning purposes.

Background: The pilot has direct contact available with the Weather Bureau station and its trained meteorologists at all too few locations. Pilots obtain most of their aviation weather information from FAA flight service stations and even these are insufficient in number to adequately service all areas where needed. The FAA has tried to reduce the number of these facilities, and has curtailed weather broadcasts in many areas, thus compounding this situation. The transcribed weather broadcasts on low frequency stations, which are used by many pilots, particularly in outlying areas, to obtain preflight weather information, have been reduced despite pilot objections. Now, the FAA is emasculating the scheduled broadcasts on the VOR facilities. Further, the FAA made a test of a direct pilot-to-forecaster radio link so that the pilot in flight could discuss his weather problems directly with the Weather Bureau forecaster, and despite the overwhelming consensus of pilots that this was a good safety program, the FAA has dropped the idea.

11. Place into effect the new flight service station program jointly worked out by industry and the FAA.

Background: AOPA and other aviation organizations have worked with the FAA in a series of meetings for many months to develop a program for a better network of flight service stations designed to provide essential services, including weather briefing to pilots, on a much wider and more effective basis than the existing system. The new system would consist of a basic network of full-time stations, supplemented by a number of smaller part-time stations located on the busier general aviation airports. The greatly increased briefing capabilities of the proposed system would make essential weather and other flight information available to many more pilots than under the existing system and would greatly enhance safety, but the FAA is dragging its feet on taking effective action.

12. Redirect the emphasis of the National Airport Plan to provide adequate facilities for general aviation, including short parallel runways on major airports, good satellite airports in major metropolitan areas and an improved system of general aviation airports (and facilities) in areas where the need exists.

Background: There has been much loose talk about banning general aviation from the major airports. This is not feasible from either a legal or a practical viewpoint. These public airports must serve all comers and there are many general aviation flights that must use the major airports because of the nature of their business, which quite frequently consists of handling connecting passengers for the airlines, or the fact that no other suitable airport exists. Short parallel runways will greatly expedite traffic handling and will enhance safety by allowing the general aviation aircraft to stay out of the areas of dangerous vortices created by the larger aircraft. Good satellite airports, with adequate facilities, will attract general aviation traffic that does not have to go to the major airport. Most pilots would prefer such an arrangement, but good facilities generally do not exist today in many metropolitan areas, leaving the pilot no choice. In other areas, there is a great need for improved general aviation airports.